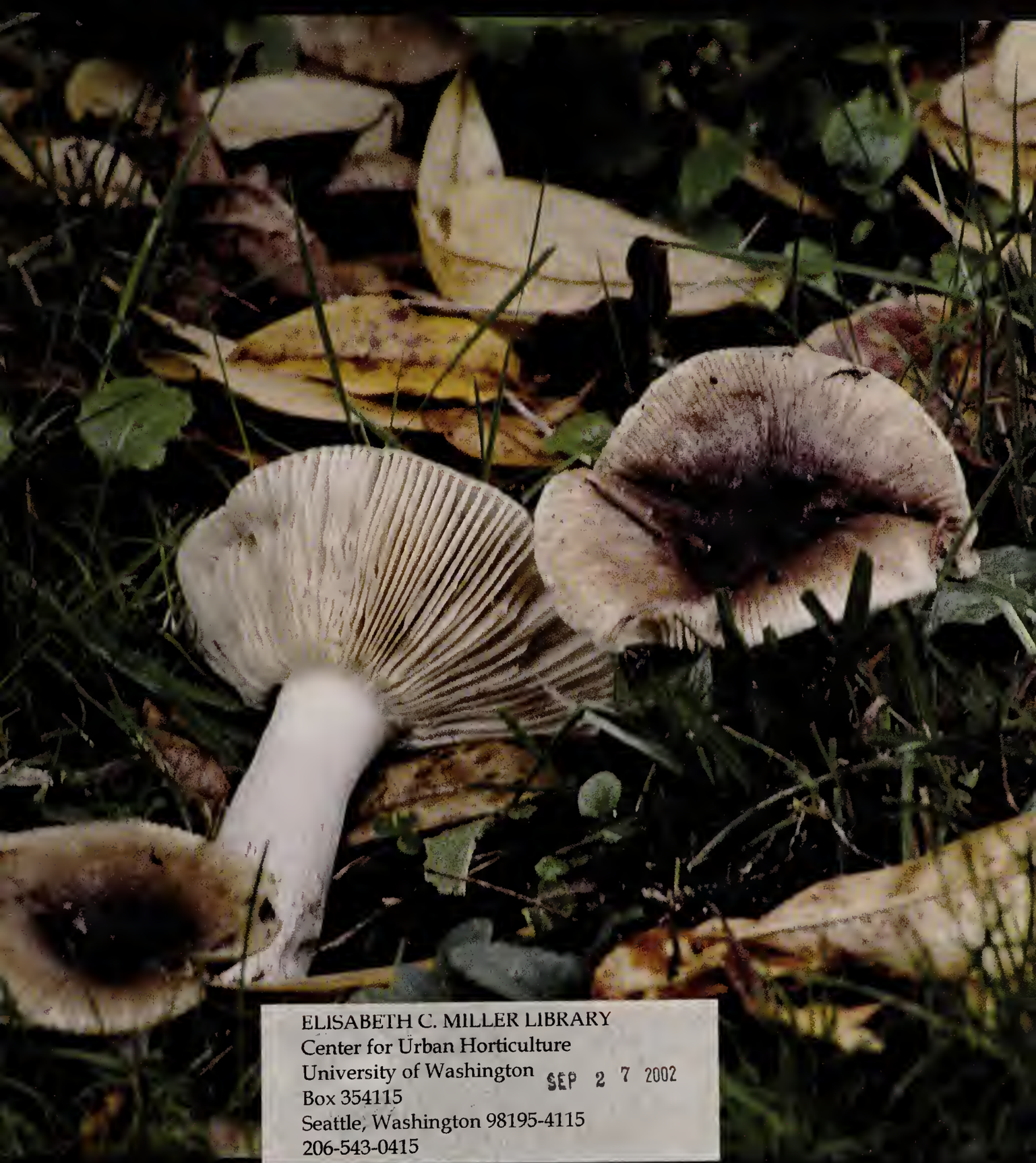
Washington Park Arboretum

BULLETIN



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Fall 2002

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Washington Park Arboretum Bulletin
Published quarterly by the Arboretum Foundation
for the Washington Park Arboretum

Washington Park Arboretum

The Arboretum is a 230-acre living museum displaying internationally renowned collections of oaks, conifers, camellias, Japanese maples, hollies and a profusion of woody plants from the Pacific Northwest and around the world. Aesthetic enjoyment gracefully co-exists with science in this spectacular urban green space on the shores of Lake Washington. Visitors come to learn, explore, relax or reflect in Seattle's largest public garden.

The Washington Park Arboretum is managed cooperatively by the University of Washington and Seattle Parks and Recreation; the Arboretum Foundation is its major support organization.

Graham Visitors Center

Open 10 AM—4 PM daily;
holidays, NOON—4 PM.
Closed Thanksgiving and the Friday after,
Christmas and New Year's Day.
The Arboretum is accessible by Metro bus #43 from downtown Seattle and the University of Washington campus

Arboretum Foundation

The Arboretum Foundation is a nonprofit organization established in 1935 to ensure stewardship for the Washington Park Arboretum and to provide horticultural leadership for the region. The Foundation provides funding, volunteer services, membership programs and public information in support of the Arboretum, its plant collections and programs. Volunteers operate the gift shop, conduct major fundraising events, and further their gardening knowledge through study groups and hands-on work in the greenhouse or grounds.

2300 Arboretum Drive East, Seattle, WA 98112
206-325-4510 voice / 206-325-8893 fax
206-726-1954—events hotline
www.arboretumfoundation.org
Office hours: 8:30 AM—4:30 PM weekdays
Gift shop hours: 10 AM—4 PM daily

University of Washington

The University of Washington manages the Arboretum's collections, horticultural programs, facilities and education programs through its Center for Urban Horticulture.

206-543-8800 voice / 206-325-8893 fax
Office hours: 8 AM—5 PM weekdays
www.wparboretum.org

Washington Park Arboretum
John A. Wott, Ph.D., Director

Center for Urban Horticulture
Thomas M. Hinckley, Ph.D., Director

Seattle Parks and Recreation

The City of Seattle owns the Arboretum's land, including the buildings. Seattle Parks and Recreation is responsible for routine maintenance within the Arboretum and manages and operates the Japanese Garden.

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Washington Park Arboretum Bulletin

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Contents

ABOVE: The "Shaggy Mane" mushroom (*Coprinus comatus*) is commonly found in grass or gravel, sometimes even in sawdust. It is edible. As the mushroom matures, the cap melts into a black fluid that can be used as ink.

ON THE COVER: This mushroom is a member of the *Russula sororia* group and is often found growing under pine, oak and fir trees. Although this one was growing under a magnolia, a Douglas fir (*Pseudotsuga menziesii*) was close by. With this issue of the Bulletin, the cover design has been changed to accommodate a wider variety of photographs. We hope you like it!

The shiny leaves and almost iridescent blue fruit of the tall Oregon grape (*Mahonia aquifolium*) make it a favorite of both gardeners and Arboretum visitors. Look for it this autumn.

From Sultry Summer to Refreshing Fall

Though we enjoy summer's sultry evenings, its flowers and outdoor living, autumn brings its own special joys to our lives. First to come to mind is glorious fall color. What could be more relaxing than a stroll through the Arboretum's Japanese maples, fiery in color but softened in fall's gilded light?

Cooking fall's harvest is a seasonal pleasure looked forward to every year. Freshly picked mushrooms with rich, earthy aromas, and berries that bring back memories of jars filled with sweet, shiny jam sitting on the counter in grandma's kitchen are just two of the season's treats. You'll read about mushrooms in this edition of the Bulletin, but make sure you purchase them at your local market, or forage somewhere other than the Arboretum! Berries, even when inedible for human beings, are often good for our feathered friends. The Arboretum's trees and shrubs constantly rustle as birds wrestle ripe berries from branches.

Don't delay your next Arboretum visit. You'll want to stop by the Plant Donations area before it closes for the season at the end of October. There, you'll find cyclamen and other favorites, along with many surprises, all donated by Foundation members and friends to benefit the Arboretum. Donations is open for sales every Wednesday and second Saturday from 10 a.m. to 2 p.m.

Enjoy this edition of the Bulletin and revel in fall at Washington Park Arboretum!

Deborah Andrews

Deborah Andrews, Executive Director,
Arboretum Foundation

COMBINATIONS UNLOCKED

The Whys & Wherefores of Favorite Plant Combinations

4: A Bouquet for a Traffic Island

TEXT & PHOTOGRAPHS BY ELEANOR THIENES

Although I have been asked to work on planting designs for all sorts of interesting spaces, perhaps the most surprising request was for a design for a traffic circle. This is not just any traffic circle, of course, and it isn't even circular in shape. But it is only a block from my home, so I knew it needed to be successful. Otherwise, my neighbors and I would find it a daily irritation.

The neighbor who asked me to design a planting for this traffic island said she would organize ongoing water and care, so choices weren't limited only to the sturdiest hypericum or juniper. And even though some year-round interest was desirable, it was clear that a peak

This planting for a "desert" island depends upon complementary foliage color: dusky purple loropetalum and almost chartreuse green canna leaves. The gazania in the foreground provides a bit of surprise for those navigating the concrete sea.

bloom time, when most neighbors were out and about, would be appreciated. Our budget was established by door-to-door collection, since rare and extravagant choices didn't seem necessary for this location.

Planting a traffic island is not so different from planting an unusually large container. Height of plants, color, texture, bloom time, and care requirements all need to be considered. And if choices prove durable, the final result can be a combination that provides six months of colorful enjoyment.

Contorted willow (*Salix matsudana* 'Tortuosa') and Spanish lavender (*Lavandula stoechas*) manage to soften the mundane wood, concrete and steel of traffic island necessities.

In this composition, the *Loropetalum chinense* 'Monraz' (*L. chinense* 'Razzleberri') even holds its almost maroon, mature leaf color throughout the winter. The new, brighter purple growth pushes the old leaves off in the spring. The loropetalum and a corkscrew willow (*Salix matsudana* 'Tortuosa') are the two largest plants in the traffic island. Regular, late winter pruning keeps the willow at an appropriate four-to-five-foot height. Its contorted branches also provide year-round interest, and if it threatens to grow out-of-bounds, we just dig it up and start a new plant with branches cut from the old one.

In late spring, the fuchsia-pink, witch hazel-like blooms of the loropetalum prove irresistible to passers-by, and joining them are the strong, bright blue blossoms of the low-growing *Veronica peduncularis* 'Georgia Blue.' Named and introduced by Roy Lancaster from a collection he made in the former Soviet Georgia, this veronica often blooms again in late summer.

By early summer the island's additional occupants have become significant parts of this giant bouquet. Several cannas, with almost chartreuse green, red-tipped foliage, joined the planting from a nearby pea patch. Their bold leaves complement the finer foliage of the willow and the loropetalum, and the gray-blue, rounded foliage of *Hebe pinguifolia* 'Pagei' cools the composition. Grace and frothiness are provided by wispy, uncombed hair grass, *Nassella tenuissima* (syn. *Stipa tenuissima*).

Summer color is added by Spanish lavender (*Lavandula stoechas*), which came from my garden. The rich, lilac purple of its blossoms and its long period of bloom are always satisfying. Exclamation marks are provided by peachy-gold gazanias, replanted every summer for their annual contribution.

So far, we haven't noticed drivers on pilgrimage from far-away states pulling up to admire our long-sought traffic circle, but the neighbors seem to enjoy it. Several reliable women have taken it upon themselves to see that it is watered frequently during warm spells. After all, since it is surrounded by heat-reflective concrete, it is rather like a large potted plant in the middle of a desert. Even so, cooperation and appreciation have created an unexpected oasis in our neighborhood. ~

Eleanor Thienes, a Seattle landscape designer, is a member of the Bulletin's Editorial Board. She can be reached at 206-722-7126.

HORT 101

Test your horticultural vocabulary with these terms used in this issue!

ACCESSION, (ak sesh´ ən) noun

Something added to a collection: an envelope of seed, a batch of cuttings or an individual plant. Each accession acquired by the Arboretum is given a number, such as 21-77. The two digits following the hyphen indicate the year of the accession; the number before the hyphen indicates this accession's number in the sequence of acquisitions of that year. Therefore, the above accession would be the 21st acquisition of 1977.

DIOECIOUS, (dī ē´ shəs) adjective

Producing male and female flowers on separate plants. POLYGAMO-DIOECIOUS: Nearly dioecious, but with some perfect flowers present on some plants. PERFECT (of flowers): Having both male and female parts in a single flower. Also know as bisexual.

FUNGUS, (fung´ gəs) noun

Any member of the kingdom Fungi that lives by decomposing and absorbing the organic material in which it grows, including mushrooms, molds, mildews, and yeasts.

HERBARIUM, (hûr bâr´ ē əm) noun

A systematically arranged collection of dried plants or the place where such a collection is kept. (For further information on the Hyde Horticultural Herbarium, see the *Bulletin*, Volume 63, Issue 1, Spring, 2001.)

MYCELIUM, (mī sē´ lē əm) noun, pl.

The mass of threadlike elements (hyphae) that form the vegetative part of a fungus.

MYCORRHIZA, (mī´ kə ri´ zə) noun, pl.

A symbiotic association of the mycelium of a fungus with the roots of certain plants, in which the hyphae form a closely woven mass around the rootlets or penetrate the cells of the root.

PISTIL, (pis´ tl) noun

The female, seed-bearing, part of a flower consisting of a stigma, at the top, to which pollen adheres, an elongated style, which elevates the sigma, and an ovary, which ultimately becomes a fruit, at the base of the style.

PROVENANCE, (prov´ə nəns) noun

Place or source of origin.

RIPARIAN, (ri pâr´ ē ən) adjective

Of, situated or dwelling on the bank of a river or stream.

SCREE, (skrē) noun

A steep mass of loose rock on the slope of a mountain, talus.

STAMEN, (sta´mən) noun

The male part of a flower consisting of a stalk (filament) bearing an anther which produces the pollen.

VOUCHER SPECIMEN

A pressed, mounted plant specimen which serves as a permanent record and reference for a specimen in a botanical garden or a plant found in the wild. Carefully labeled with collection date, locality, collector's name and other pertinent information, a voucher specimen is an easily accessed resource for the identification of plants.

The variety and beauty of seeds and their containers create artful design. From left to right: In the top row, the seed of *Rosa nutkana* var. *hispida* (contained in a pome or fruit), *Picea engelmannii* (cone). Middle row, *Acer circinatum* (samara, a winged fruit), *Berberis aquifolium* var. *repens* (berry), *Arctostaphylos columbiana* (berry). Bottom row, *Cornus canadensis* (drupe, fruit with a single seed, such as a cherry), *Cornus nuttallii* (drupe), *Calocedrus decurrens* (cone).

A Well-Kept Secret

BY RANDALL HITCHIN

So you think you know all about the Arboretum? Familiar with all the special places here and things going on there? Think you've seen it all? Perhaps so, but there is one program that is likely to be a mystery, even to many long-time members, affiliates and fans of the Washington Park Arboretum. It is the Arboretum's most far-reaching program. It operates year-round and is of vital importance to the development of the plant collection. And it is strangely ironic that this program remains a well-kept secret despite its scope and importance.

Think you've figured it out? It's the Index Seminum, of course.

'Index' What?

Index Seminum is a fancy-sounding, Latin phrase that simply translates 'seed index' or

'seed list.' The phrase describes a method of distributing plants that is peculiar to botanical gardens, and it also describes the publications these institutions produce and distribute. Index Seminum is a free exchange, with no fees charged or payments made. It operates quid pro quo, with each garden providing seed catalogs to other gardens and receiving catalogs from those gardens in return. Indeed, Index Seminum is an excellent example of the kind of cooperation that is possible among botanical institutions across the globe, and illustrates the potential to bridge the barriers of distance, politics and language. In doing so, each garden benefits its own plant collection while assisting the efforts of its peers.

The practice and publications now known as Index Seminum probably have their roots in the 17th and 18th centuries, when European botanical gardens were viewed as resource centers for plants of economic potential. Although the major gardens of that era vied to have the largest collections, there also arose a tradition of plant exchange. When European gardens began to publish catalogs of their holdings, it was implicit that this material was available for exchange upon request. By the second half of the 19th century, seed lists or Index Semina had begun to evolve from the printing of collection catalogs to the distinct and separate publications we recognize today.

These publications now originate in nearly every corner of the world. However, the majority of participating gardens is still located in the Northern Hemisphere, the largest number of these in Europe. While these publications all have the same purpose, their appearance varies greatly, from humble to very elaborate, from single sheets produced on the office copy machine to perfect bound booklets with color lithography.

In the Arboretum

From its beginnings in 1936, the exchange of seed was a common and important part of the Arboretum and its expanding plant collection. The first accession recorded in the Arboretum records, accession # 1-36, was derived from seed exchanged with the Morris Arboretum of the University of Pennsylvania. By 1953, when plant collection curator Joe Witt assumed leadership of the Index Seminum program, seed exchange already had more formalized character. Over the next 20 years, seed exchange partnerships increased dramatically, from about 100 to over 400 recipients. Other staff members who contributed significantly to the program include Brian Mulligan, Pablo Abellera and Jan Pirzio-Biroli. Among the legions of volunteers who have contributed to the program over the years are the members of Arboretum Foundation Units 25 and 66.

Washington Park Arboretum
INDEX SEMINUM
2001 Overview Statistics

Institutions receiving the catalog	**456**
Countries receiving the catalog	**58**
Countries receiving seed	**34**
Orders filled	**113**
Seed packets distributed	**1091**
Seed packets requested	**1202**

Today, seed exchange remains a vital component of collection development at many botanical gardens, and the Washington Park Arboretum is no exception. A casual inspection of the Arboretum accession records indicates that over half of all plants in the collection were originally derived from seed. The largest proportion of these seeds was received from Index Seminum exchange partners. Taken in aggregate, Index Seminum remains the single largest source of new accessions. A simple walk through the Arboretum is all that's required to demonstrate the importance of this program (See sidebar, Page 9).

At present, the Washington Park Arboretum Index Seminum has reciprocal exchange arrangements with several hundred other institutions, with a few new ones appearing each year. The table on Page 7 provides a summary of the program exchange activity for the most recent year.

Program Renewal

Behind these recent statistics is a story of transformation. Over the last three years, the Washington Park Arboretum Index Seminum program has undergone the most significant overhaul in its history. Probably the most visible of these changes is an entirely redesigned catalog, complete with a logo and program motto: "Progressio per inventionem," a Latin phrase meaning "advancement through invention" or, more colloquially, for individuals facing the challenges of cleaning, packaging or starting seed, "figure it out as you go along." The new seed catalog makes it easier to place and fill seed orders and provides detailed information for the items offered.

The design and installation of a customized database system has eliminated laborious 'pen and paper' records and has automated several tasks. The database has become the primary tool for managing all program activities, including tracking orders received and shipped as well as all exchange partner information. It also produces packing slips, shipping labels, summary reports, most of the content for the seed catalog, and the inventory of the seed bank.

Following the database system was the installation of greatly improved seed storage facilities. The new seed bank makes it possible to store seed at a constant 5 degrees Celsius and 20 percent relative humidity, environmental conditions that are optimal for preserving seed viability in many temperate species. The ability to store seed benefits the Arboretum Index Seminum in a variety of ways, not the least of which is the assurance of high quality (viability) seed distributions. In addition, seed storage improvements foster a greater diversity of species offered by freeing staff from the need to collect and process seed of a species each year, instead allowing them to add new species to the catalog.

Perhaps the most significant of recent program changes are shifts in focus and philosophy. A recent concern is the potential introduction of invasive plant species via seed exchange. In addressing this concern, the Washington Park Arboretum was among the first public gardens to establish an invasives policy for its Index Seminum. This policy incorporates a statement intended to raise the awareness of our exchange partners, evaluations of those species the Arboretum receives, and a screening process to evaluate the invasive risk of species considered for inclusion.

In recent decades, there has also been growing criticism from botanists regarding the value of material distributed through Index Seminum. In the words of one writer, "the lists have tended in many cases to become overlarge, unselective, inaccurate and repetitious in the sense that they often contain the same material, often received shortly before from some other garden." This criticism has

Index Seminum Sampler

This listing represents only a very small sample of the many wonderful Arboretum specimens that have originated from seed obtained through Index Seminum. For those wishing to go on a tree hunt, the accession number for each plant is printed in parenthesis.

Cercidiphyllum japonicum var. magnificum (104-83)

The three specimens of this accession are located in the new camellia bed (grid 8-3E), where their leaf color and fragrance are an autumn highlight. Received from Kalmthouut Arboretum, Belgium.

Carpinus fargesiana (39-93)

In spring, the shoreline east of Duck Bay (grid 47-7E) is brightened by the ruby red new growth of this small tree. Summer brings pendant, hop-like fruits. Wild collected seed from Sichuan province, China. Received from Shanghai Botanic Garden, China.

Pinus devoniana (198-92)

This Mexican pine is located at the center of the Pinetum (grid 37-5W), where it is easily distinguished from its neighbors by its long, lush foliage. Received from the Hamburg Botanic Garden, Germany.

Phellodendron insulare (237-81)

Looming over the point to the west of Duck Bay (grid 49-2E), is this large, deciduous member of the citrus family. Wild collected seed from South Korea. Received from Chollipo Arboretum, South Korea.

Catalpa fargesii f. duclouxii (82-96)

This medium sized, deciduous tree is located in the lower Rhododendron Glen (grid 13-3E), where its lilac flowers and light green foliage are a cooling sight in mid-summer. Received from Kalmthouut Arboretum, Belgium.

The autumn color of *Cercidiphyllum japonicum* var. *magnificum* has lured many an Arboretum visitor to take a closer look.

Cornus controversa (136-83)

Adorning the Puget Sound Rhododendron Hybrid Garden (grid 27-1W) is this excellent specimen, with the 'wedding cake' form typical of this species. Received from Tallinn Botanic Garden, Estonia.

Manglietia fordiana (48-81)

This small, evergreen relative of the magnolias is located on the south rim of Loderi Valley (grid 28-2E). Cupped, ivory-white flowers in early summer. Wild collected seed from Anhwei province, China. Received from Shanghai Botanic Garden, China.

Pinus armandii (136-83)

A rare white pine of exceptional grace. Located in the Pinetum (grid 37-5W). Wild collected seed from Taiwan. Received from the Taiwan Forestry Institute.

Betula chinensis (122-83)

This unusual birch, with multiple stems and very small foliage, is located in the north end of the Pinetum (grid 43-6W). Received from Chollipo Arboretum, South Korea.

been accompanied by cautionary notes about the risks of hybridity in garden origin seed and calls for an emphasis on quality over quantity. In particular, there is growing awareness that the distribution of documented, wild-collected seed can address many of these concerns. This approach is also quite efficient because each botanical garden, no matter how large or small, is uniquely qualified to distribute seed of species native to its own region.

In light of these issues, the focus of the Arboretum Index Seminum has been modified. Beginning with the 2000-2001 season, the Arboretum Index discontinued distribution of seed obtained from the Arboretum plant collection. All offerings are wild collected seed of species native to the Pacific Northwest, and each is accompanied by thorough field collection data. This regional focus with emphasis on documented seed distributions of known, wild provenance provides a superior service that has been very well received by our exchange partners.

The Annual Cycle

Index Seminum revolves around the reproductive cycles of living plants. This fact alone gives the program a pace and rhythm that seems organically different from other enterprises. While the program calendar is truly cyclical, with no real beginning or end, one could think of the year beginning in December and January. Much like Christmas cards, the seed catalogs or Index Semina arrive in great numbers during this season. From these catalogs, seed requests are placed and within a few weeks to several months, the filled orders returned in the mail. After each seed lot is entered into the Arboretum records system, it is sent to the Arboretum plant propagator. The beginnings of a new forest!

During the spring, as filled seed orders are returned from other institutions, the mail

Gravity—another danger of seed collection. The author, high in an incense cedar (*Calocedrus decurrens*), in search of cones.

is also filled with seed requests in response to the Arboretum Index Seminum. These seed requests are filled and returned to our exchange partners during late spring and early summer. This is a very busy time of year for the exchange, as seed orders are pulled, filled, packaged, sealed, stamped and mailed. These countless hours of effort are generously donated by the volunteers who fuel the program.

Also during the spring, plans are hatched for the seed forays of the approaching season. Field guides, regional floras and detailed maps are among the tools used to identify promising areas for collection. There are two types of forays, and once a collection site has been identified, it will be the subject of both. The first visit to a collection area is scheduled in conjunction with the peak flowering period. This "scoping foray" allows program staff and volunteers to identify target species in flower, estimate population size, and if necessary, mark populations to be relocated for seed collection. The second visit is the

"collection foray," during which seed of previously identified species is collected.

Whether it is for scoping or seed collection, these forays are full of both pain and joy. They can involve blowing dust, biting insects, blistering heat, and rugged terrain. On a recent foray, our party was 'buzzed' by numerous rattlesnakes during a single afternoon. On the other hand, the summer forays are in many ways the highlight of the year, permitting program volunteers and staff to visit areas of significant botanical interest and gain practical field experience.

For each seed collection, a voucher specimen is also collected. These specimens document the seed collection and provide a means of verifying the original determination of identity for each collection. All voucher specimens for the Arboretum Index Seminum are deposited with the Otis Douglas Hyde Herbarium, at the Center for Urban Horticulture.

Harvest

Having safely returned with the wealth of field and forest, the program shifts gears, changing from seed collection to seed processing. The tools of the trade are surprisingly 'low tech.' There are pots, bins and tubs of every size as well as screens and sieves and other familiar kitchen items. In the process, a great deal of the outdoors is brought inside. There are bins full of cut stems and piles of fruit and seed heads. And along with these come two things: bugs and odors. This can make the seed room a fairly lively place. Happily, the insects are usually quick to depart, but the often pungent odors can linger. Visitors have compared the atmosphere of the seed room to, among other things, a wool mill, a candy store, a hay barn, a sausage factory, or a locker room. When all is complete, this pungent, messy, chaotic harvest has been reduced to clean, dry seed, stored safely in the seed bank.

By early fall, the harvest has been processed and the list of seed to be offered in the next Index Seminum can be quickly compiled. Formatting the publication is the next step, and, with any luck, the catalogs will be returned from the printer by Thanksgiving. After a flurry of envelope stuffing and stamping, the Arboretum Index Seminum will be mailed across the globe. And with that accomplished, a full turn of the seed calendar is complete.

It's hard to imagine how all this could be such a well-kept secret. I can't explain it, but maybe the cat's finally out of the bag. ~

Randall Hitchin is the registrar and collections manager for the Washington Park Arboretum.

What's My Line?

BY BRIAN THOMPSON

Stumped? Here's how to find the answer to your horticultural question.

My rhubarb is wimpy. How can I make it thrive?

Gardeners are full of questions. There is always something new to learn, and even the greenest thumb can be stumped by some unexpected setback.

How do I prune my lithodora?

Answers aren't always easy to come by. But many have found the large collection of horticultural books and other resources at the Elisabeth C. Miller Library a good place to look.

How did Native Americans use skunk cabbage?

Starting in 2001, with the launching of Plant Answer Line, the Miller Library's quick reference service for gardeners, getting answers from this collection became a lot easier.

I'm interested in growing tropicals in the Pacific Northwest? Any info?

Give this service a try by calling 206-UW-PLANT (206-897-5268) between 9:00 a.m. and 5:00 p.m., Monday through Friday. Or leave a voice-mail message at any other time.

What are some Web sites with good pictures of poisonous plants?

Questions can also be sent from the library's Web site (www.millerlibrary.org) by clicking on the Plant Answer Line logo and filling out the question form. Or just send e-mail to hortlib@u.washington.edu.

I need a listing of all the Japanese gardens in the United States.

An on-going grant by the Pendleton and Elisabeth Carey Miller Charitable Foundation makes Plant Answer Line available year round.

Which native plants are recommended for slope stabilization?

Everyone on the Miller Library staff takes a turn at answering questions, and all have considerable expertise in both gardening and finding answers.

We had birds (chickadees?) building a nest in our birdhouse. There was a lot of activity. Now it's very quiet. What's happening?

The primary voice of Plant Answer Line (PAL) is Carol Orion, a former Master Gardener and research librarian at a large, private company. Carol recently shared what she likes about being "on air" with PAL.

I bought a plant at the hardware store but it's dying. Can you tell me how to fix it?

"I love working the Plant Answer Line. I love being in the Miller Library, one of the finest horticultural libraries in the country. And the subject matter!"

I'm looking for a tree ...or hedge ...that will provide a decent screen ...requires little maintenance ...doesn't grow too tall ...is evergreen ...grows fast ....

"The best part is the interview process. Then trying to figure out what the caller really

needs to know, translating it into something I can search for, then translating information back into English."

What plants will attract birds to our backyard, but not deer?

"Interview, research, synthesis and finishing with a usable product—it's like a game!"

What chemical will sterilize my cottonwood? I need to control the cotton because my neighbors are not very happy with me.

"The people who call are fun—98 percent of them are wonderful. I've only had three or four unpleasant calls since the Plant Answer Line started."

What is the definition of hydric soil?

"My best resources can be found right here: the Miller Library reference collection, the Miller Library directory of horticultural Web sites and the people around the Center for Urban Horticulture and the Arboretum."

Where can I buy Euphorbia characias 'Portuguese Velvet?'

"All sorts of people call: landscape architects and designers, the staff of local retail nurseries, such as Molbak's, City People's and Flower World, garden writers such as Valerie Easton or Marty Wingate. Even Ph.D. horticulturists."

Can you suggest a "home" remedy for controlling powdery mildew and black spot on roses?

"But most of the questions come from garden hobbyists—the whole range, from overwhelmed beginners to aficionados who could write the books themselves."

What varieties of figs should I grow in my West Seattle garden?

"Although our service is designed for gardeners around Puget Sound, we've received e-mail messages from all across the United States and Canada, even from as far away as Israel and Italy.

Do climbing hydrangeas come in something more interesting than white?

"The funniest call so far came from Ciscoe Morris. He was looking for the name of a Scandinavian tree with berries that make a wonderful wine. The thought of a wonderful Scandinavian wine from a tree was just too much...."

Is "plastic" wood safe to use in raised vegetable beds?

"The hardest questions are those where answers can only be found in the rules and regulations of some bureaucracy."

I have rather large ants in the house. How do I control them or redirect their activities?

"Every question is so different. You can't just go back to the same sources over and over again."

My Asian pear is not bearing. I have several books on fruit trees, but they give different advice. Can you help?

"I don't decide right or wrong if sources give conflicting responses. Who can judge if the Royal Horticultural Society or Washington State University provides more valid information? So I share both and make sure the sources are always included."

Is this bug a Gypsy moth? (verbal description worthy of H. G. Wells follows)

"There are questions that simply can't be answered over the phone. Many are referred to the closest Master Gardener clinic or to services provided by professional horticultural organizations."

My class project is due tomorrow. Please tell me everything there is to know about....

"I have to draw the line sometimes! For these folks an invitation to visit the Miller

Library is extended, complete with our open hours and driving directions."

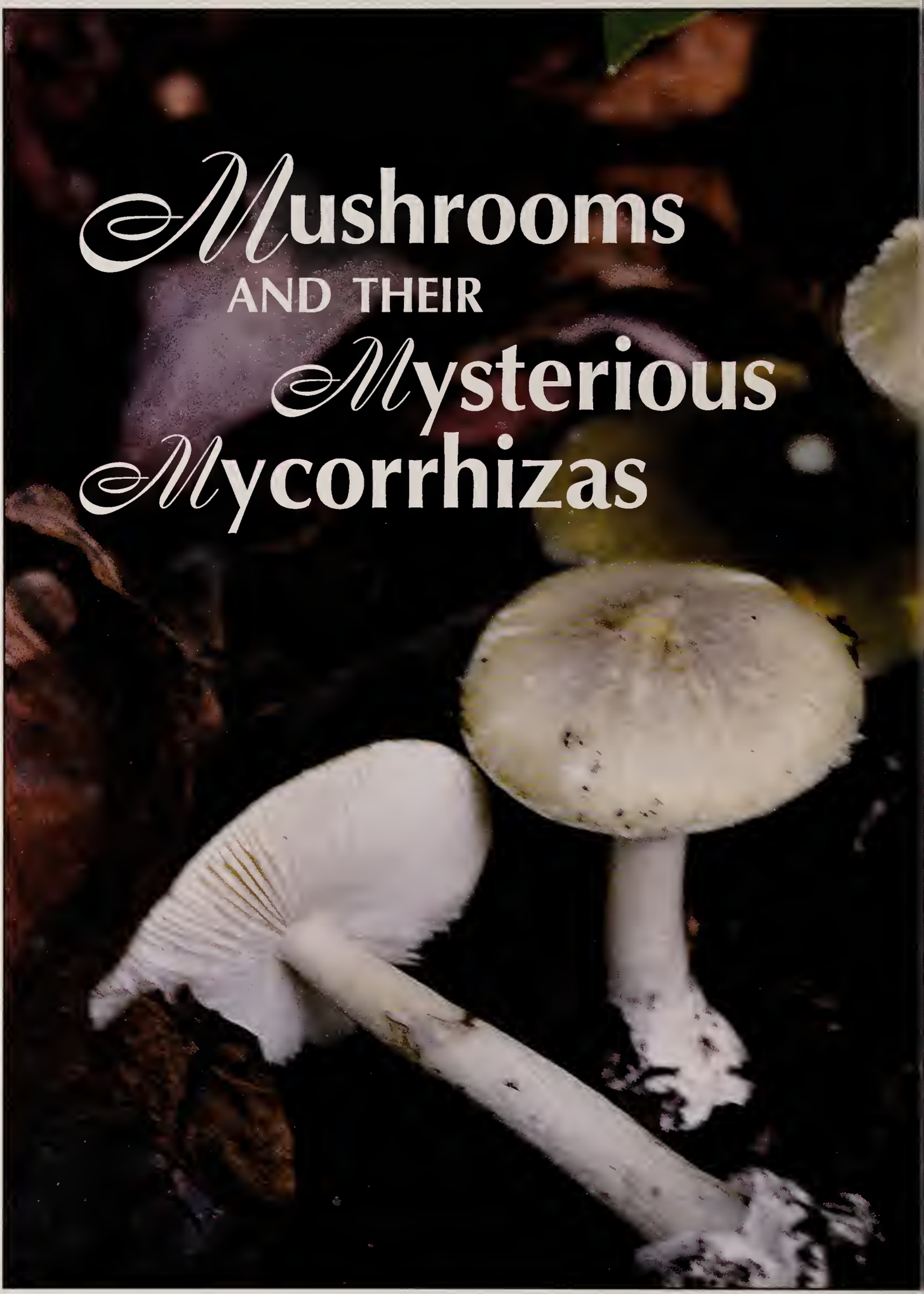
How do plants use water? Why do flowers smell the way they do?

"Sometimes I'm stumped. Sometimes there simply is no answer. Sometimes it would require a Ph.D. dissertation to really answer the question properly."

Thank you so, so much. What a wonderful resource this Plant Answer Line is! Your answer was just what I needed to know.

"Sometimes I can envision myself doing this for the next 50 years—and smiling all the while." ~

Brian Thompson is a librarian at the Elisabeth C. Miller Horticultural Library. The Plant Answer Line may be reached by calling 206-UW-PLANT (206-897-5268).



Mushrooms AND THEIR Mysterious Mycorrhizas

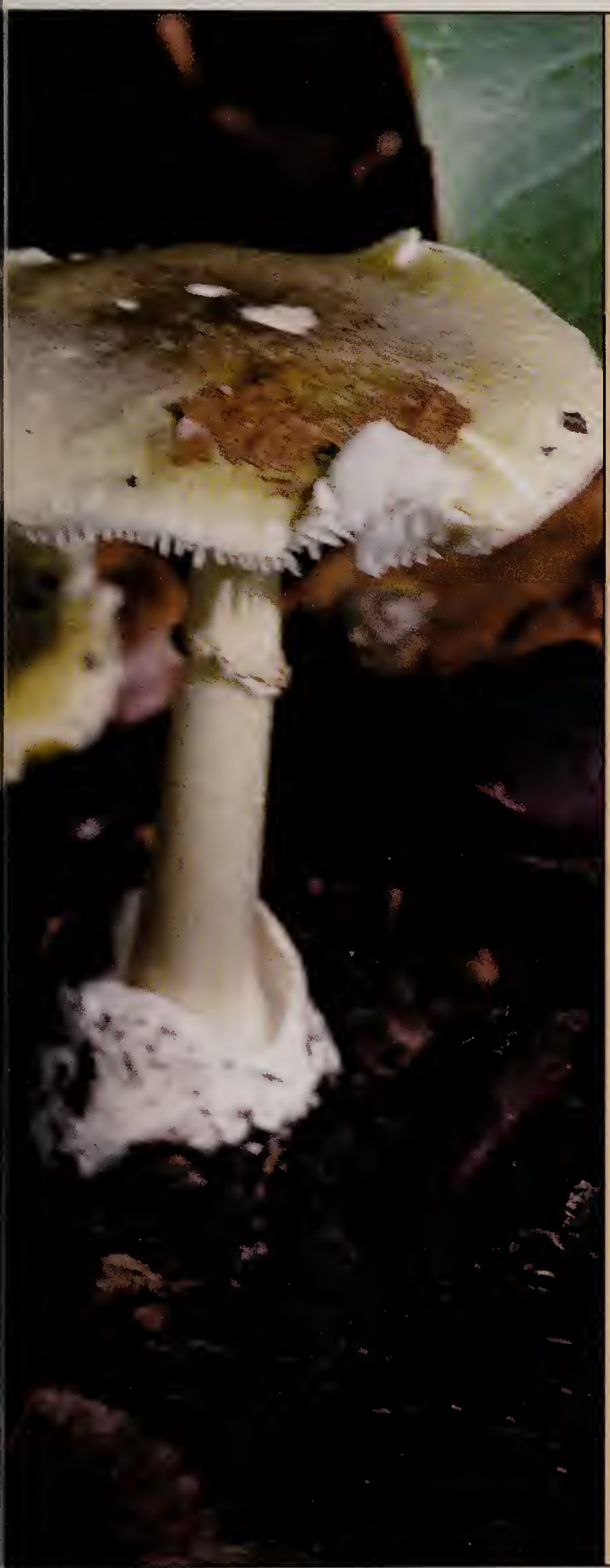


PHOTO ESSAY
BY JOY SPURR

INTRODUCTION
BY FRED RHOADES

As you walk in the Arboretum on a fall afternoon, enjoying the red and gold of trees and shrubs, drop your eyes to the ground. You may see equally colorful mushrooms. What are these strange creations? Why are they growing there? Why have they disappeared when you walk the same trail a few days later?

Mushrooms are the fruiting bodies of a kind of fungus that develop from a minute, diffuse body of branched threads known as a mycelium. For many species the mycelium grows from year to year and produces mushrooms during one season (usually fall in the Pacific Northwest). The appearance of mushrooms is determined, to some extent, by ground temperature, moisture

Although *Amanita phalloides* is uncommon in this area, it was found in the Arboretum in October 1997. It is deadly poisonous. It can be recognized by its smooth greenish-yellow cap, white gills, broad white ring on the stem and saclike volva at the base of the stem.

and environmental associations. Fruiting can be spectacularly fast, almost overnight, but mushrooms soon finish with their job of spore release and then decompose. Mature spores are spread by wind or animals that feed on mushrooms. Of the millions of spores produced, only a few land in a favorable habitat and develop new mycelium.

Many mushroom-forming fungi establish symbiotic relationships with roots of plants known as mycorrhizas (the other half of these fungi are decomposers, and a very few are plant parasites). In most mycorrhizas, the fungus receives carbon from the host plant, and in return, the host plant receives mineral nutrients and water from the fungus. Although often mutually beneficial, these relationships can also be complex, and, in some cases, there are other interactions that may not be beneficial to all associates.

During the last 40 years, there has been considerable research on mycorrhizas, with particular focus on those of economic importance. Plant nurseries and the forestry industry find that inoculating seedling tree roots with the proper fungus culture improves tree growth.

Ectomycorrhizas

An ectomycorrhiza is the type of mycorrhiza usually formed between mushroom-producing fungi and certain trees. The majority of other plants form different kinds of mycorrhizas with fungi that don't produce fruiting bodies. Ectomycorrhizas appear as branched rootlets that lack root hairs and are either swollen or covered with fluffy mycelium. Cross-sections of such mycorrhizas show an outer covering of fungal filaments and extensions of the mycelium growing into the root to form a network that surrounds, but does not actually enter, the root cells. In addition to mineral- and water-gathering capabilities, fungi also have been shown to protect host roots from the entry of disease-causing agents, some by the production of antibiotics.

Worldwide, some 6,000 species of mushroom-forming fungi have been shown to form ectomycorrhiza. Such favorite edibles as chanterelles, boletes, corals and teeth fungi, all truffles and false truffles are ectomycorrhizal, as are many other genera with fewer or no edible species, such as Amanita, Hygrophorus, Inocybe, Russula, Lactarius, Cortinarius and Tricholoma.

Left: *Verpa bohemica*, the false morel, grows under cottonwood and alder in early spring. It is hard to find, since it is often hidden by dead leaves. **Right:** Ectomycorrhiza associated with the base of the mushroom *Russula brevipes* (upper left) on the root of Western hemlock.

Lycoperdon perlatum (left) is edible if its flesh is pure white. It is one of the most common puffballs in the Pacific Northwest and is found beside Arboretum trails and in planting beds. Its cap and long, stem-like base are covered with small, short spines. *Lycoperdon pyriforme* (right) is also edible if its flesh is pure white. The outer color of the fruiting body is tan or brown, white at the base with white strands of mycelium.

Although some mushroom species are host-specific, others have a broad tree host range. Trees usually have many potential fungal associates. Red alder (*Alnus rubra*) is known to associate with 11 specific ectomycorrhiza fungi. Douglas fir (*Pseudotsuga menziesii*) is estimated to form a partnership with over 2,000 species. The Death Cup mushroom, *Amanita phalloides*, which has been found in the Arboretum, has quite strict mycorrhizal associations with northeastern oaks and a few other non-native hardwoods. Fortunately, this mushroom is unusual in the Northwest. However, there have been deaths attributed to it in the Portland area where it formed mycorrhizas with chestnut trees.

Orchid mycorrhizas

Although they have not yet been found in the Arboretum, recently some otherwise ectomycorrhizal *Russula* and *Lactarius* have been discovered to form a different kind of mycorrhiza with certain orchids. Coral root orchids (*Corallorhiza* species) and other non-green orchids are linked by fungi that form regular ectomycorrhizas with a photosynthetic tree nearby. The relationships among all these partners are not completely clear. The fungus gains carbon from the tree, but passes some on to the orchid, along with minerals and water. It is almost as though the orchid parasitizes the fungus, but the fungus may receive benefits from the orchid that have not yet been discovered.

Bibliography

Although one guidebook cannot include the thousands of mushrooms that grow in the Pacific Northwest, an excellent guide for those who want further information on the most common mushrooms is "The *New* Savory Wild Mushroom" by Margaret McKenny and Daniel E. Stuntz, revised and enlarged by Joseph F. Ammirati, University of Washington Press, 1987; it is available in the Arboretum gift and book shop.

You may also wish to consult a more technical article: Mycorrhizas and Their Horticultural Importance, by John Merrill and May Solomonson, Washington Park Arboretum Bulletin, Volume 40, Issue 2, 1977.

Left: *Amanita pantherina* causes more poisonings than any other mushroom in this area. Look for white warts on a brown or tan cap, white gills, and a close-fitting cup at the base of the stem; but if the white warts are washed off by rain, *A. pantherina* could be mistaken for an edible species. **Right:** *Boletus zelleri*, with its reddish-brown to nearly black cap and red or yellow-streaked-with-red stem, is edible. **Below:** This rare mushroom, *Panus conchatus*, varies in hue from red to purple and brown but turns brown as it ages. Here, it is growing on a fallen, moss-covered, rotting red alder trunk on Foster Island.

Take this copy of the Bulletin with you on your next autumn walk. With luck, you may be able to recognize some of the mushrooms you encounter. But remember, don't rely on pictures alone for mushroom identification. Use a guide with descriptions, and never pick Arboretum mushrooms. Some of them are poisonous.

Joy Spurr is a member of the Puget Sound Mycological Society. Fred Rhoades is a member of Bellingham's Northwest Mushroomers.

RENEWING THE WASHINGTON PARK ARBORETUM

Eco-geographic Exhibits

BY JOHN A. WOTT, DIRECTOR

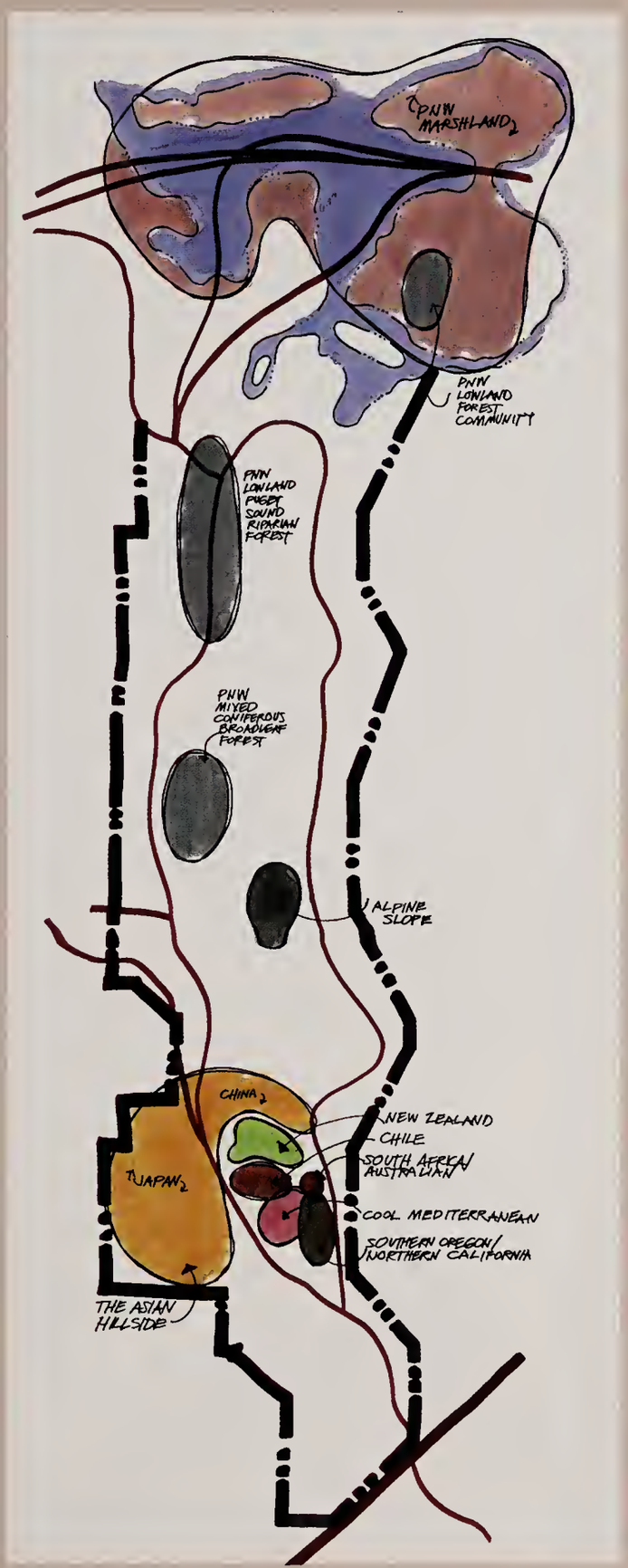
The third component of the Arboretum master plan highlights eco-geographic exhibits in which visitors and students find themselves immersed in accurate, naturalistic recreations of forest communities around the world, emphasizing locations from which Northwest garden plants have been selected.

Nearly a century ago, Frederick Law Olmsted indicated that plants included in some type of eco-geographic display should indeed be components of the arboreta and botanical gardens he designed. When the Olmsted firm's James Dawson created the plan for the University of Washington Arboretum in Washington Park in 1935, he also included eco-geographic exhibits in his design.

Olmsted and Dawson may have been thinking of specific areas where plants from one part of the world could be displayed in conventional row or box designs. In today's eco-geographic exhibits, plants from a specific part of the world are planted to appear much as they do in their country of origin.

There are several compelling reasons for creating such gardens. First, by conserving groups of plants, especially endangered species, we may add to the long-term conservation of some species. Second, "immersion" is now a very popular way to teach students of all ages. Many of the new exhibits at the Woodland Park Zoological Gardens use this technique. The visitor or student learns more about other habitats by being surrounded by both plants and animals of a specific area of the world.

Imagine standing in the middle of a Chilean forest with tall monkey puzzle trees around you and then walking directly into a north-western forest matrix surrounding it. Or



looking at plants in a natural, eco-geographic display and then seeing the same plants used in a landscape design nearby. Teachers have also expressed interest in teaching the ethnobotany of an area surrounded by the vegetation that is essential to that culture.

Northwest Natives

The first type of eco-geographic exhibit will feature Pacific Northwest native plant communities. One of those exhibits gradually will be created along the shoreline of Union Bay and will include Pacific Northwest marshland plantings. By removing invasive plants, natives can again flourish. The shoreline improvement project just begun on a portion of Duck Bay and Foster Island will also include this type of exhibit. And it will certainly increase the food supply for native wildlife.

A Pacific Northwest lowland forest community will be re-established in wetter areas of Foster Island. Along the northern section of Arboretum Creek, a lowland Puget Sound riparian forest will be established. This informality will contrast nicely with the more park-like collections of the Pinetum and western Arboretum grounds.

The last type of native exhibit is a Pacific Northwest mixed coniferous/broadleaf forest, the major component of the Arboretum's native tree matrix; it will be highlighted and interpreted in several locations throughout the grounds.

Similar Climates

The second type of eco-geographic gardens are plant communities of cool, winter-rain regions of the world which have climates similar to the Pacific Northwest, west of the Cascades. This collection of gardens will be installed on the hillsides surrounding the new Madrona Terrace interpretive shelter.

Included will be gardens of these regions:

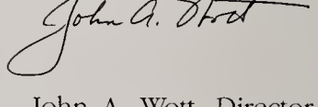
- Chile, the forests of the Lake District in south central Chile.
- The Cool Mediterranean, a forest of a winter-rain region inland from the Mediterranean coast.
- Southern Oregon/Northern California, a forest related to our Pacific Northwest community but with additional trees and shrubs which are northern elements of California flora, including madrone.
- South Africa, Australia, and Tasmania, a small exhibit of plants from regions that are typically considerably warmer than Puget Sound country.

Pacific Rim Regions

The third type of eco-geographic exhibit should be familiar to Arboretum visitors: plant communities of other Pacific Rim regions. These plantings will also be installed near Madrona Terrace:

- New Zealand, a high altitude forest community with winter-cold temperatures similar to the Seattle area. The current New Zealand high country exhibit, sponsored by the Seattle/Christchurch Sister City committee and spearheaded by Dr. John Bollard, is an example of a New Zealand scree garden.
- Japan, plantings on the western slopes of Madrona Terrace which will provide important "borrowed scenery" for guests to view from within the Japanese Garden.
- China, a representation of the forests of Mount Omei, where a large number of Northwest garden plants originate.

One area does not fit into any of the preceding categories. In the middle of the Arboretum, along the new switchbacks that will allow visitors in wheelchairs to move easily from Arboretum Drive East to Azalea Way, there will be a magnificent display of plant communities from the alpine slopes of the world.



John A. Wott, Director,
Washington Park Arboretum

Salix babylonica var. pekinensis 'Pendula' z6 d2" sababpe $12.00
Our Eric Hammond's collection of the true Babylon Weeping Willow in China in 1997, where he was duly impressed with its elegant and graceful habit of growth. With bright green stems, the habit of growth is much taller than wider, and creates a much different creature than the Weeping Willows in commerce. Expect trees ultimately to 45 ft., ideally suited to moist areas. Avoid septic drainage fields!
Salicaceae China

Sapium japonicum HC 970268 z8 d4" sajap268 $10.00
An uncommon tree in cultivation with rounded, deciduous foliage. Yellowish green flowers produced in June in axillary racemes, resulting in three-lobed fruit. Our collections from Cheiju-do, S. Korea, this small tree offers some of the best autumn color of any woody plant in our collection, in shades of lacquered oranges and reds. Perfectly tame in the Pacific Northwest, this should not be considered for landscape use in the steamy southeast and deep south due to invasive potential. 25 ft. PINY
Euphorbiaceae S. Korea

Sorbus

Though I had become acquainted with the European Mountain Ash during my college days at Michigan State University, it was not until I moved to Seattle in 1983 that I became aware of their astounding diversity. I lived then at the Stone Cottage on Lake Washington Boulevard in the Arboretum and had 250 acres of plant collections at my doorstep. On daily winter walks through the Arboretum, I would be continually pulled from the paths by small trees or shrubs that I was certain had come into early blossom. The ruse of beaming whites, pinks and deep reds, however, would arise from clusters of fruit from a well-vetted collection of Sorbus species from around the world. When we purchased the property that would become Heronswood in 1987, a pair of *Sorbus forrestii* given to me from the late director of Arboretum, Brian O. Mulligan, who had a special fondness for the genus, were among the first to be included in the garden. It is mid-November as I write this, and yesterday I looked out to this pair that have matured commendably in fourteen years. They are heavily fruited with copious clusters of glistening white, pink-flushed berries, which will soon enough be devoured by equally immense flocks of robins, Steller's Jays, Varied Thrushes and Common Flickers. But before the feast is finished, I will recall those winter walks at the Arboretum and all I have learned of this genus subsequently in my excursions to Korea, Japan, Nepal, China, Taiwan, Vietnam as well as in our own mountain ranges of Washington State. From dwarf prostrate shrublets bearing finely textured pinnate foliage to dense columns of broad platinum leaves, the Mountain Ashes are an expressive and highly ornamental contingent of hardy shrubs and trees that deserve a place in every garden.

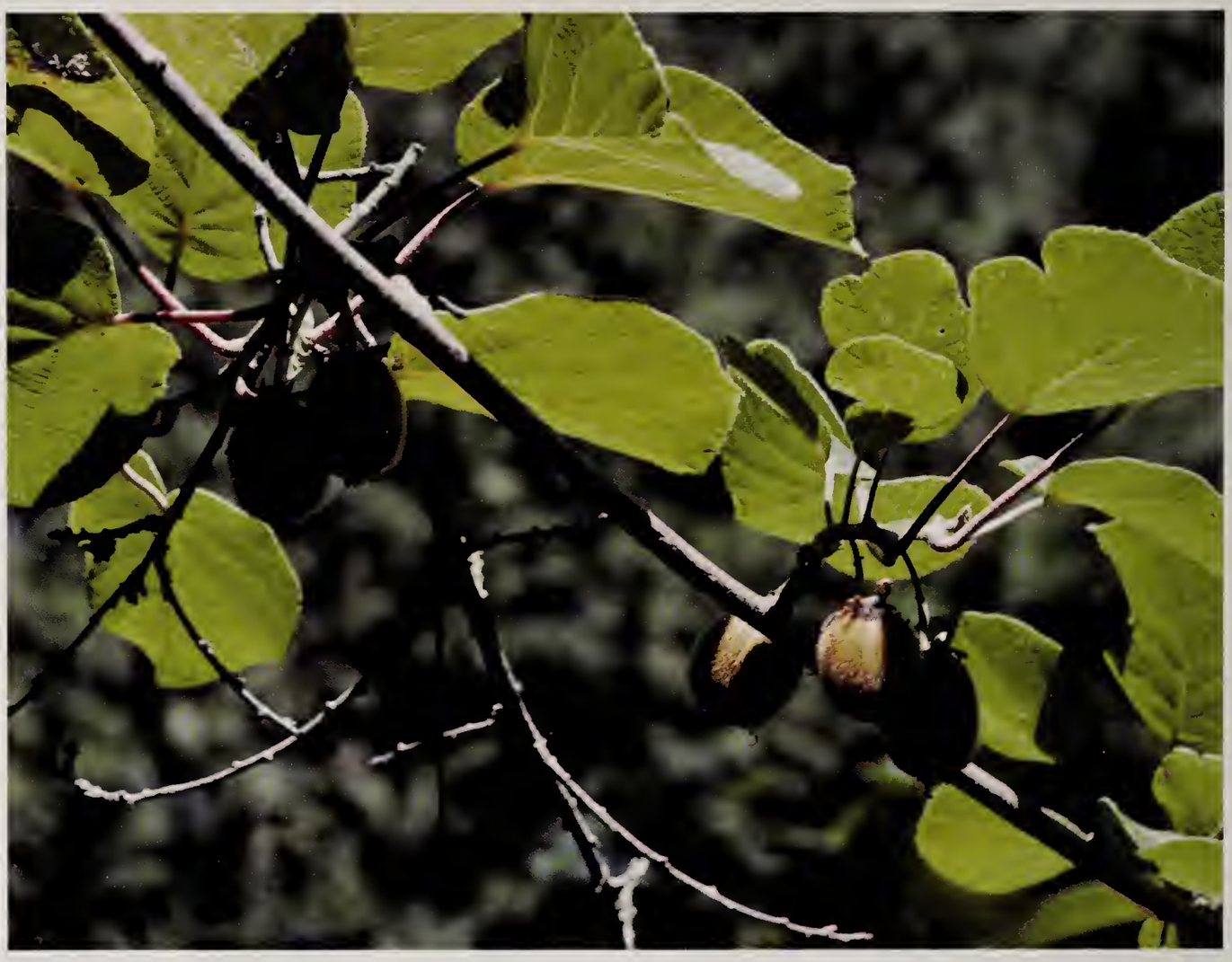
Sorbus hupehensis DJHC 360 z6 d4" sohup360 $12.00
Growing beneath large specimens of *Abies fabri*, in a rich botanical area near Shu Du Hu on the Zhongdien Plateau, grew this variable species with fruit color ranging from pure white to deep rose-pink. These are collected from the darkest pink-fruited specimen I found, certainly more striking than any I have seen in cultivation up until this point. These small rounded-crowned trees to 25 ft. Full sun or open shade in well-drained soil with adeq[illegible]igation. *Rosaceae* Yunnan

Sorbus khumbuensis [illegible]okhu $8.00
I was recently supplied the new name of this lovely r[illegible]bus 'Khumbu' in the past. Native to the Khumbu district of east[illegible]perfect foil to the clusters of pink flowers in early spring, r[illegible] summer and early autumn. We have developed [illegible] southeast side of our home.

Sorbus rehderiana DJHC 98133
My collections of this species on the eastern [illegible] providing a dazzlement of autumn tones in [illegible] fruit colors as well on rounded trees to 3[illegible] tremely deep rose-red fruit produced in s[illegible] we expect the seedlings to be true. Full

Sorbus sargentiana EDHCH 97149
An extraordinary species that we hav[illegible] very large, leathery pinnate leaves, [illegible] in autumn. Of the compound lea[illegible] over time, to 20 ft. x 20 ft. Eric's [illegible]

JOY SPURR



Actinidia deliciosa (syn. *A. chinensis*) can be ornamentally useful while the gardener awaits its ripening fruit.

Growing Kiwis In the Pacific Northwest

BY HILDEGARD R. HENDRICKSON

Yes, you can grow kiwis in the Pacific Northwest, not only the hardy ones (*Actinidia kolomikta* and *A. arguta*), but also the fuzzy kind (*A. deliciosa*). All kiwis have lime green flesh, but their size and skin color vary. Kiwis taste wonderful and contain ten times more vitamin C than lemons, more vitamin A than avocados, more potassium than bananas, and many trace elements not found in other fruit. For nutrition alone, they deserve consideration in your garden!

I have grown kiwis for twenty years. They contract no plant diseases, attract no bugs. They need little fertilizer and care, but they do need a sunny location, protection from strong winds and constant, uniform watering. And your pruning shears always need to be sharp. Kiwi vines grow vigorously in the spring. They need frequent pruning and a

strong trellis or arbor to support the heavy fruit load.

Kiwis don't require a subtropical climate. Hardy kiwis can tolerate temperatures in the teens, while very young, fuzzy kiwi vines (*Actinidia deliciosa*) need winter protection if we get an arctic blast. They should be wrapped during extremely cold temperatures, but if plants do freeze to the ground, they will regrow from the roots the next year. If the original kiwi plants were rooted from cuttings, the new growth from the roots will be the same sex and variety. This is not the case with grafted plants, when the shoots growing from the rootstock will have to be regrafted.

Most kiwi varieties are polygamo-dioecious, so you need to plant both a female and a male plant. In mid-June, all Actinidia species bear single, white, fragrant flowers that vary in size depending on the species. Blossoms are produced on the current season's growth. Male flowers have only stamens, while female flowers have only pistils. Hardy kiwis (*A. kolomikta and A. arguta*) grow to the size of a grape or larger. They have smooth skin, green to dark red in color, and the whole sweet fruit can be eaten, skin and all, straight from the vine. Fuzzy kiwis (*A. deliciosa*) are larger, and most people peel them before eating.

Here in the Pacific Northwest, fuzzy kiwis are harvested late in November (preferably after a good frost or two, which makes them sweeter). Fuzzy kiwis are too hard to eat right after harvest. They store very well in a cool, ventilated place, like a carport. Bring a few fuzzy kiwis at a time into a warm house and lay them on a counter; gradually they will become soft enough to eat. To hasten softening, put a few kiwis into a brown paper sack with a couple of apples. I harvest fuzzy kiwis from three female plants, and after sharing with family and friends, I enjoy several every morning 'til the following June. To keep them nice and plump, I wrap them in a plastic sandwich bag and store them in a cardboard box in a cool place. I prefer to eat fresh kiwis, but you also can use them for salads, pies, jam, ice cream and wine.

Before the fuzzy kiwis bloom, you cannot tell whether a plant is male or female. When my fuzzy kiwis bloomed for the first time (in their eighth year), all three were females (even though I thought I had purchased two females and one male). I was fortunate to know other kiwi growers who gave me male kiwi flowers,

HILDEGARD HENDRICKSON

Tips for growing kiwis successfully are visible in these photographs: first, be sure to support them with strong posts and trellising; second, do not harvest kiwis until after their leaves have fallen.

which I used to hand-pollinate the flowers of my female plants. I have since planted a male fuzzy kiwi plant which blooms at the same time as my female plants, but I still hand-pollinate the female kiwi flowers, because, in my garden, there are not many insects around in mid-June to do the job.

I also grow, in containers, *Actinidia arguta* varieties, including the self-fruiting cultivar 'Issai.' Their cultural requirements are similar. The plants are smaller but also vigorous growers. Their smooth-skinned, grape-sized fruit ripens in October. The small, sweet kiwis are soft enough to eat from the vine and can be refrigerated for about a month.

Originally the kiwi came from southern China and was called the "Chinese gooseberry" or "monkey peach." Fuzzy kiwis have been cultivated and marketed in New Zealand for more than 70 years. There have been vines in California for more than 50 years, but commercial production did not begin until the 1960s. Recently, commercial plantings have been started in Europe and Chile.

Although all kiwi varieties are deciduous, they are also quite ornamental and can be used to cover walls, fences, arbors, or anything else that needs to be camouflaged in a hurry. Without doubt, kiwis belong in every edible landscape!

Hildegard Hendrickson is a member of the Seattle Tree Fruit Society.

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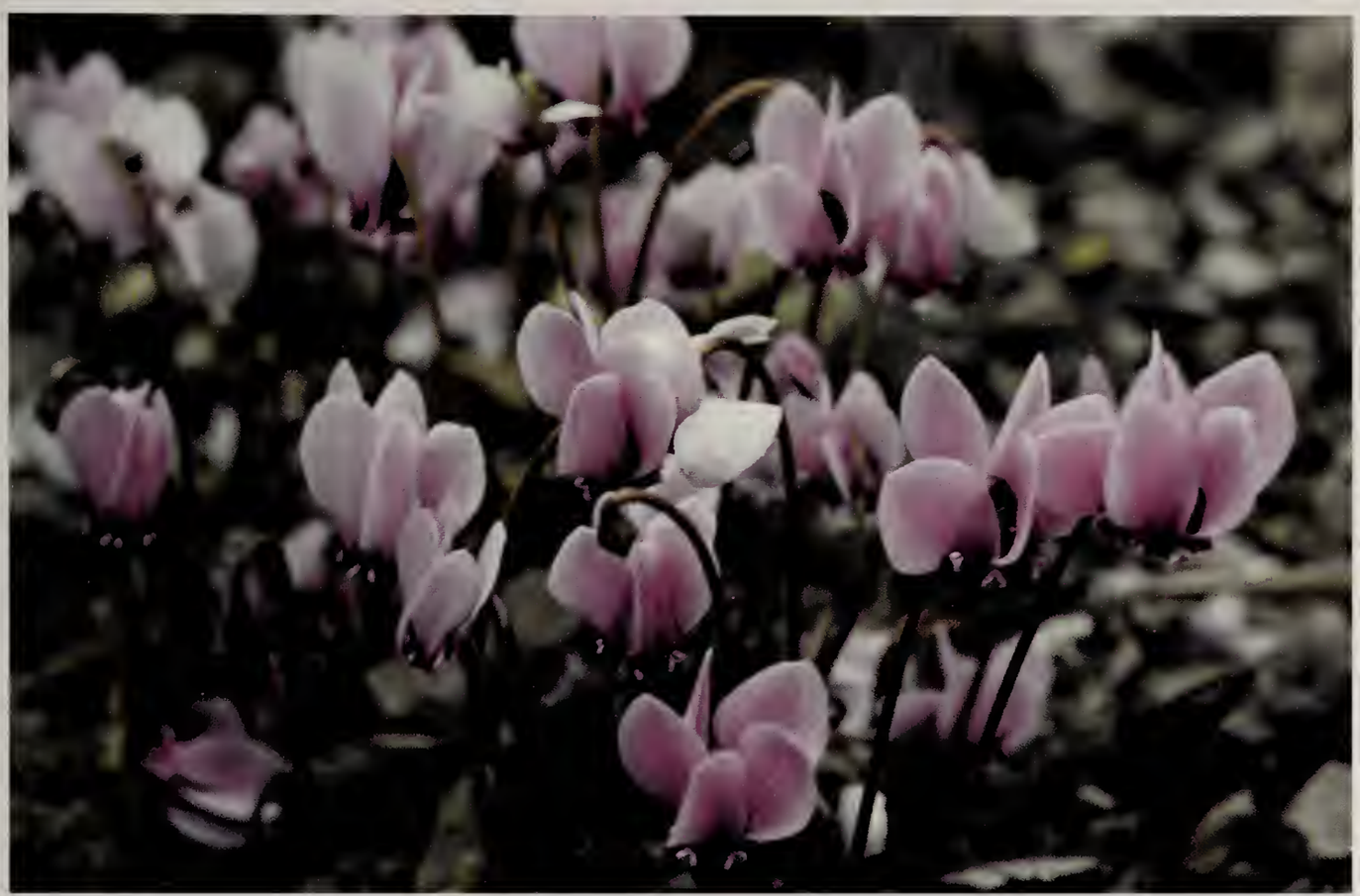


Autumn Butterflies: *Cyclamen hederifolium*

BY MYRNA OUGLAND

Foliage is most appreciated when flowers are few. The silver and green leaves of autumn cyclamen (*Cyclamen hederifolium*), beneath the skeletal branches of maples and birches, are as elegant as any Persian carpet, cheering in a season of subtle grays and browns.

Also called the ivy-leafed cyclamen (*hedera* meaning ivy, *folium* referring to the leaves), this easygoing corm, which is sometimes referred to as "beginner's cyclamen," is hardy to USDA zone 5. The leaves are very much like ivy, or elongated hearts, with slightly serrated edges, and the silver markings form a regular pattern, though no two leaves are like. Some are more green; some are quite mottled, and the fad now is to obtain cyclamen with leaves completely pewtered.

Above: Poised as if to take flight, the blooms of *Cyclamen hederifolium* bring fresh energy to the autumn garden. **Below:** The silver-veined foliage of *C. hederifolium* is inspiring to hardy winter gardeners and garden-visitors.

A blanket of *Cyclamen hederifolium* blossoms carpets the ground under a small magnolia.

Ashwood Nurseries in England has perfected this seed strain, and they are now available locally (not inexpensively!).

The autumn cyclamen produces typical cyclamen flowers in shades from white to rose in late summer and fall. Katherine Whiteside, in "Classic Bulbs," referred to the flowers as being like "tiny flying nuns in pastel habits." Elizabeth Lawrence wrote (in "The Little Bulbs") of the flowers as "resting as lightly as butterflies on their short, stiff stems and looking as if they had settled but for a moment between flights." They make a fetching scene if planted near pink, autumn-blooming colchicums.

A member of the primula family (Primulaceae), *Cyclamen hederifolium* comes from southeastern Europe, Turkey, and Greece, and has also been called *C. neapolitanum*. Along with the smaller, winter-flowering *C. coum*, autumn cyclamen prefer dappled shade and well-drained soil, and they do well at the base of deciduous trees, even birches,

or beneath the canopy of rhododendrons. The flowers appear before the leaves, sometimes as early as August. As the flowers begin to fade, in October, the stem coils, drawing the ripening seedpod safely down onto the mother corm. The leathery brown pod slowly swells, and eventually—about August of the following year—opens at the top. The seeds are round, and large, as seeds go, with a gelatinous look because of a sticky coating. The coating reputedly lures ants into taking the seeds away, licking off the sweet outside, and leaving them to sprout elsewhere.

The leaves begin to expand as the flowers fade and remain in their glory throughout winter. They are lovely in combination with snowdrops or early Crocus chrysanthus, which sometimes blooms in January. Toward spring the leaves become tattered and slug-eaten, and the corms go dormant for the summer, but by then the garden has other distractions.

There are, depending on the reference, as many as 19 Cyclamen species, not all hardy. For example, the florist's cyclamen, *C. persicum*, won't survive a frost, and it is very difficult for the average gardener to keep going for more than one season. The autumn cyclamen, however, seems foolproof, and is easily multiplied by seed.

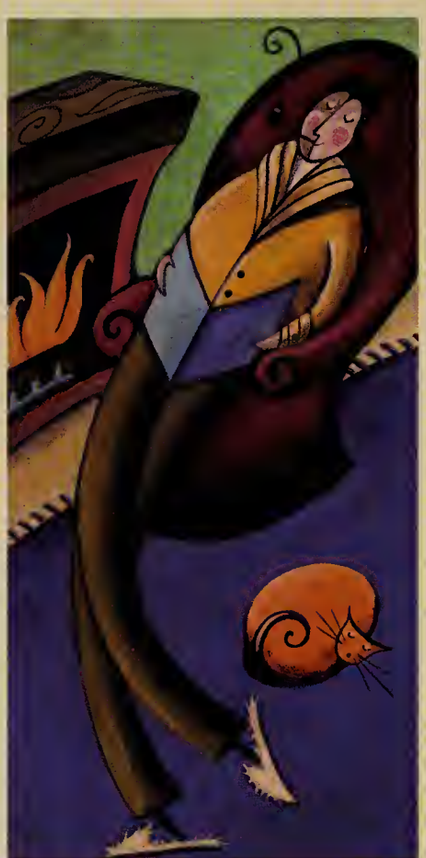
Seed is best sown fresh, and will send up tiny, solitary leaves less than two months after being scattered in a damp seed flat. Alternatively, seed may be left to germinate where they fall (often directly on top of the mother corm), and the single-leafed baby corms may be gently detached in early spring and replanted where desired. Left undisturbed, corms can become as big as a fist after many years, and will often migrate toward the soil surface. Over time, the patient gardener will be rewarded with a carpet of silver and green to brighten the dullest days of midwinter. ~

Myrna Ougland is a member of the Bulletin's Editorial Board. Bravely, she gardens on over two acres in Kitsap County.

A Horde for the Holidays (Or for Horrid Weather!)

BY BRIAN THOMPSON

Got enough books to last through the rainy season? Or to give to your favorite Northwest gardener? This past year has been rich in horticultural publications by local authors. Continuing a one-year-old "tradition" in the fall issue of this Bulletin, gathered here are some of the choicest of these new offerings.



Perhaps the book most eagerly awaited by the Elisabeth Miller Horticultural Library staff was the ninth edition of "The Northwest Gardeners' Resource Directory," which was created, written and published by Stephanie Feeney through eight editions until her death in December 2000.

Fortunately for gardeners, her handpicked successors—Debra Prinzing, editor, and Sasquatch Books, publisher—stepped forward to continue this valuable resource. It makes clear, like no other publication, the Northwest's abundance of horticultural riches: nurseries, large and small; gardens to visit; sales, shows and tours; plant societies and gardening clubs; garden products and services; Internet resources and key books and periodicals. It's all here. And all with the latest contact information, open hours, driving directions, Web sites (a special effort was made to include these) and everything else you need to go, see or do. While maintaining the successful format of earlier editions, all the information has been reviewed and 95 percent updated in some way. Quite simply, this belongs in every gardener's personal library.

Practical Inspiration

New ideas for garden design can be found in no less than four new books. The most systematic is "Home Landscaping: Northwest Region" by Roger Holmes and Don Marshall, who teaches environmental horticulture at Lake Washington Technical College in Kirkland. The talents of seven regional landscape designers are applied to 20 typical landscape challenges, such as entryways, curbsides, borders and plantings around a deck. Precise descriptions are provided for each plan, followed by the how-tos for building the suggested hardscaping along with helpful tips on growing recommended plants. Easily within the reach of a beginner, the book also offers solutions to conundrums that vex the most seasoned gardeners.

Ann Lovejoy has established a gardening school at her home on Bainbridge Island, and much of what she teaches has been included in "Organic Garden Design School." Each chapter reads as one lecture in an on-going

class taught by a personable and infinitely patient teacher. Much of the material is illustrated from personal experience and is complemented with photographs, diagrams, drawings and charts—great handouts for the student gardener. There is even a workbook to practice what has been learned. Completing the "course" will assure readers' knowledge of the basics of design, plant culture and organic gardening methods.

Richard Hartlage's "Bold Visions for the Garden" is well titled. The author's photographs grab your attention, highlighting innovation and creativity. Currently director of the Elisabeth C. Miller Botanical Garden in Seattle, Hartlage has designed gardens across the country. His unexpected combinations of colors, shapes and textures will expand readers' sensitivity to what "works" in a garden. But don't neglect to read the text. Hartlage is solidly grounded in the fundamentals and does not hesitate to share his opinions. If your garden has the doldrums, here's a recommended antidote.

Hartlage also provided the elegant photographs of Valerie Easton's garden for her new book "Plant Life." Compiled from the author's very successful columns in The Seattle Times' Pacific Northwest Magazine, each chapter is a highly polished gem of insight based on considerable skill and practice. Subjects are wide-ranging but always intriguing and informative, as Easton knows how gardeners think and offers something for every level of expertise. Perhaps more than any of these books, "Plant Life" places the garden within the bigger picture of our daily lives.

Choosing Plants

From Vancouver, B.C., come a couple of user-friendly books on plant selection for this region. In "A Grower's Choice," Michael Lascelle asks owners of niche nurseries or specialty gardens throughout southwestern British Columbia to list their top 10 plant

choices within their area of expertise. The result is an insider's view of the best stuff from over 50 wide-ranging plant groups, including such diverse choices as Japanese maples, hardy water lilies and exotic fruit and nut trees.

Christine Allen focuses her attention on vines and other rambling plants in "Growing Up." Systematic and comprehensive, I have rarely seen such honest and informative plant descriptions. Allen includes appearance, culture and placement and also the subtle details of habit and usage that are gained only by hands-on experience. "Growing Up" will be of particular interest to the seasoned gardener who has tired of the generic information found in plant encyclopedias.

For the Specialist

Two additional books explore specific plant types. "The Sage Garden," by the prolific Ann Lovejoy, is an in-depth look at the popular genus Salvia with its many offerings of color and fragrance for the garden and savor for the kitchen. "The Pacific Coast Rhododendron Story" is also of special interest, for Sonja

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Gilkey, Helen Margaret and Patricia L. Packard. "Winter Twigs: A Wintertime Key to Deciduous Trees and Shrubs of Northwestern Oregon and Western Washington." Corvallis: Oregon State University Press, c2001. ISBN: 0870715305, $19.95.

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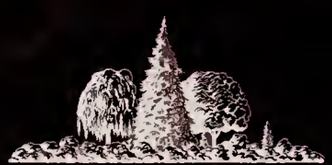
Nelson and the Portland Chapter of the American Rhododendron Society have provided an important history and scrapbook of the many individuals who promoted the culture, collection and hybridization of this Pacific Northwest signature plant.

"Forest Giants of the Pacific Coast" steps out of the garden to introduce us to the most magnificent trees of the world, which just happen to grow in our region and down the coast a piece in California. Robert Van Pelt shares a passion for his topic that is infectious as he tells the individual histories of the largest specimens of our native conifers, each accompanied with photographs, measurements and incredibly detailed silhouettes. The author speaks of these trees like old friends, and with names like Devil's Canyon Colossus (an incense cedar, *Calocedrus decurrens*) and Ol' Jed (a Douglas fir, *Pseudotsuga menziesii*), the reader will likewise be caught up in the romance of these incredible living beings.

Finally, for the keen field botanist, two small volumes will be of interest. "Winter Twigs" is an updated edition of Helen M. Gilkey and Patricia L. Packard's 1962 definitive key to the distinguishing features of the native and naturalized deciduous trees and shrubs of western Washington and northwestern Oregon in their leafless state. And the Washington State Department of Ecology has published an excellent field guide to fresh water plants in "An Aquatic Plant Identification Manual." And don't forget to look for Arthur Lee Jacobson's superb "Wild Plants of Greater Seattle," reviewed in the previous issue of the Bulletin.

Phew! That's a lot to read, but there may be a long winter ahead, so be sure to visit the Miller Library or the Arboretum gift shop to peruse all these wonderful new selections written with the Pacific Northwest horticulturist in mind. ~

Brian Thompson is a librarian at the Elisabeth C. Miller Horticultural Library.



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